

Amendments to the Specification:

Please replace the paragraph beginning at page 5, line 2 with the following amended paragraph:

As shown in FIG. 3, each active semiconductor component 30 includes one or more devices 31. Each device 31 includes a pair of conductive lines 34, 36 exposed to a local vacuum environment within the mask-stage chamber 16. The conductive lines 34, 36 of the device 31 are spaced at a critical pitch p_c 38 corresponding to the smallest particle diameter of interest. A voltage is applied to the conductive lines 34, 36 of the device 31. A metallic particle having a diameter the size of the pitch between the conductive lines 34, 36, or larger, generates a short in a current flow between the conductive lines 34, 36. A non-metallic particle having a diameter the size of the pitch between the conductive lines 34, 36, or larger, generates a change in capacitance between the conductive lines 34, 36. The short and/or change in capacitance is detected by the computer system 29. Detection of such particle(s) provides a warning that particles are in the vicinity of a critical part of the tool, such as near the mask 22 in this lithography example. When detected, corrective action can be taken, such as terminating the lithography process before the particles cause imperfections in the wafer 12. In one particular embodiment, the short and/or change in capacitance is detected by off-chip circuitry (not shown).